



Hood Canal Bridge Retrofit and East Half Replacement Project

EAST-HALF REPLACEMENT COMPLETION GOAL: 2009
WEST-HALF RETROFIT COMPLETION: 2010

Tower crane operator lowers rebar mat into place inside pontoon PA

MOVING FORWARD

In early March, the new 80-foot tall tower crane picked up wood pontoon forms and “flew” them into the graving dock, marking the start of pontoon construction. Other highlights from this quarter were:

Construction Progress

Pontoon construction for State Route 104 Hood Canal Bridge Project is now seven percent complete. East- and West-half Material Fabrication, including truss and transition span, lift span cylinder and fabrication and assembly of other steel bridge parts, is 66 percent complete.

Kiewit-General (K-G) of Poulsbo workers assembled wood pontoon forms and rebar sections in outlying work areas before construction began inside the graving dock. Completing these tasks allowed crews to work more efficiently, saving both time and costs to the overall project.

Public Outreach and Partnerships

A construction Web camera was installed at Concrete Technology in Tacoma to photograph pontoon construction. Public presentations were given at various

community venues concerning current project progress and plans for 2009 closure mitigation. Site tour protocol was developed in preparation for allowing tours of Concrete Technology.

Safety Update

WSDOT and the contractor, K-G, continued to make safety a number one priority. K-G implemented an extensive safety training program that has contributed to a safety-consciousness company culture. WSDOT adopted all of K-G's safety standards.

Financial Report

The revised K-G contract value and WSDOT administration costs, along with the expenditures to date, were incorporated into the project budget of \$471 million. As of March 31, 2006, \$196 million had been spent.

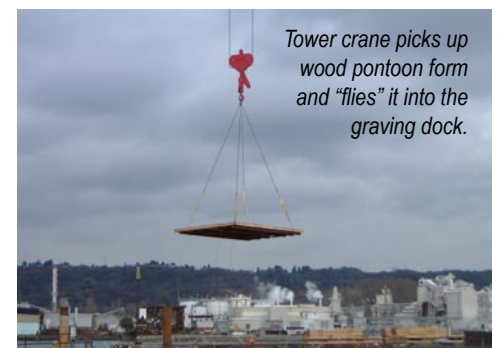
Environmental Stewardship

WSDOT, in coordination with Washington State Fish and Wildlife, restored and enhanced the beach on the west side of the bridge as part of the required approach span replacement mitigation work. All

WSDOT activities aligned with permit requirements.

Design Information

This quarter, the Design Team focused on setting up new processes, preparing plans, documenting materials and creating integrated drawings.



Tower crane picks up wood pontoon form and “flies” it into the graving dock.

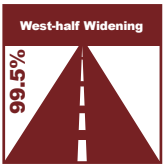
For more detailed information:

Construction Progress.....	Page 2
Public Outreach and Partnerships.....	4
Safety Update.....	5
Financial Report	6
Environmental Stewardship.....	7
Design Information	7
Looking Ahead.....	8

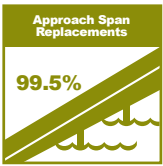
CONSTRUCTION PROGRESS

WSDOT staff and K-G began pontoon construction at Concrete Technology in Tacoma and completed most of the final work elements at the bridge site during the first quarter of 2006.

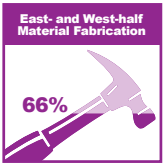
Project Site Completion Status



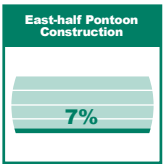
West-half widening
Crews worked through punch-list activities, including final site cleanup.



East and West Approach Span Replacement
Crews removed temporary work trestles, installed permanent signage, reviewed electrical systems and worked through final punch-list activities.



East- and West-half Material Fabrication
Ironworkers prepared for transition span assembly by reviewing design plans, testing welds and certifying workers for this complicated job. Pontoon hatch cover and draw span part fabrication continued.



East-half Pontoon Construction
Concrete Technology site preparation was completed in February. This work included installing tower cranes, pouring new sections of concrete floor in the graving dock, securing bond breaker to the graving dock floor, building forms and prefabricating rebar sections.

Throughout January and February, K-G workers assembled wood pontoon forms and rebar sections in outlying work areas before construction began inside the graving dock. Completing these



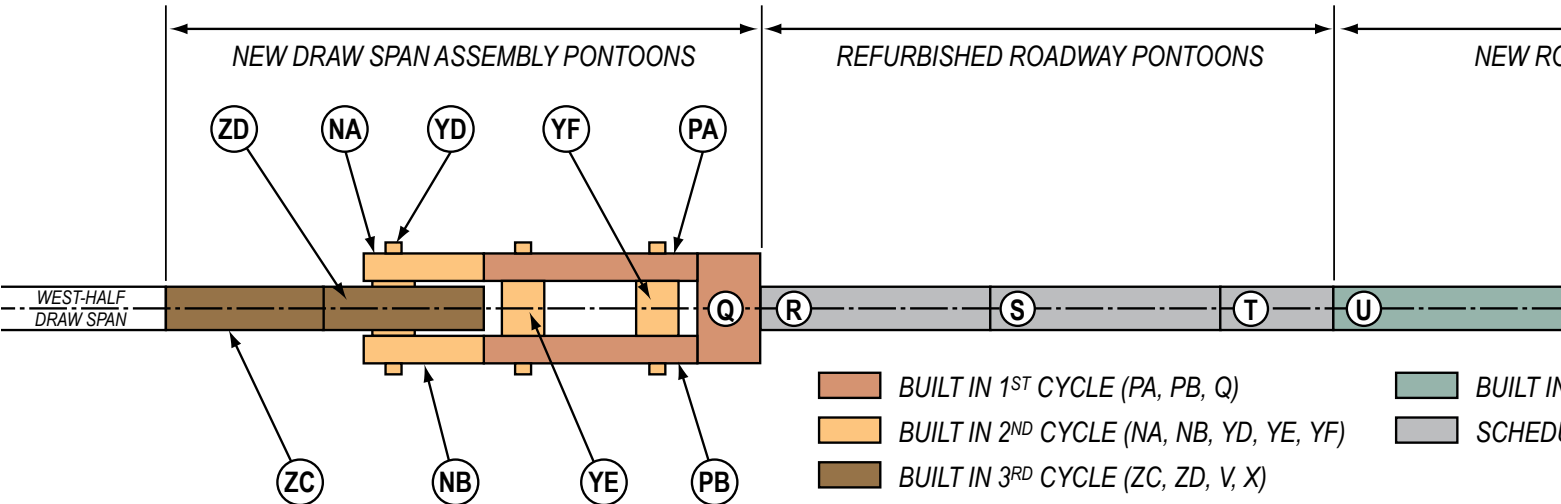
Iron worker finishes a prefabricated wall section of pontoon PA.

tasks allowed crews to work more efficiently, saving both time and costs to the overall project.

- K-G carpenters built the wood forms needed for the first three draw span section pontoons. Eleven fabrication beds were set up and crews finished five flat panel forms per day and a corner form every one to two days.
- Ironworkers bent and tied epoxy-coated rebar to create rebar “mats”, or sections, needed for the pontoon floors, walls and ceilings.

In early March, the new 80-foot tall tower crane picked up wood pontoon forms and “flew” them into the graving dock, marking the start of pontoon construction. Forms for the outside pontoon walls were installed as well as the pontoon wall pre-fabricated rebar mats.

Birds-eye View of New East-half





Looking down on Concrete Technology graving dock from the new 80-foot tall tower crane.

March 1-8

- Constructed outside form panels for pontoons Q, PA, and PB.
- Installed tower crane on the south side of graving dock.



Tower crane hoists pontoon PA end wall form into position.

March 9-15

- Set outside forms for pontoon PA inside the graving dock.
- Began tying rebar for pontoons Q and PA.



First pontoon wall forms set up by tower crane.

March 16-22

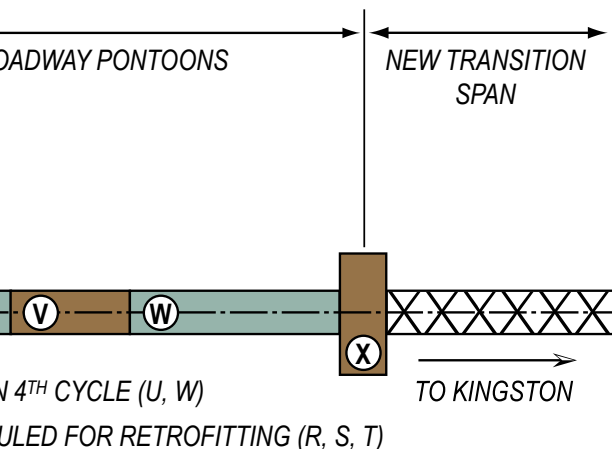
- Erected forms for pontoons PA and Q.
- Installed first layer of rebar on the west and east end walls of pontoon PA.
- Tied rebar for pontoon Q.
- Constructed interior form panels for pontoons PA and Q.
- Constructed fillet forms (forms needed to pour the concrete pontoon floor) for pontoon PA.
- Installed tower crane on the north side of graving dock.



Ironworkers install pontoon knuckle joint rebar

March 23-31

- Completed installation of outside forms for pontoon PA.
- Installed 80% of outside wall rebar and 50% of floor rebar in pontoon PA.
- Installed pontoon knuckle joint rebar. The knuckle joints connect the draw span pontoons to the roadway pontoon.
- Installed catwalks and access ladders around pontoon PA forms.
- Continued to tie rebar for pontoon Q.

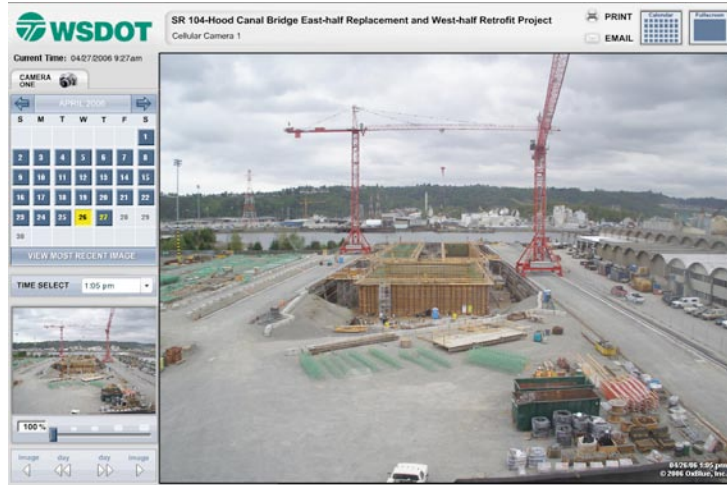


Project Overview

WSDOT and K-G will construct all 14 new pontoons inside the 150-foot wide by 465-foot long Concrete Technology graving dock by completing construction over four cycles, or phases. Three pontoons will be built in the first cycle, five pontoons in the second cycle, four pontoons in the third cycle and two pontoons in the fourth cycle.

Another three pontoons, built during the west-half bridge replacement in the early 1980s, will be retrofitted. The completed east-half pontoon roadway sections and fully assembled east-half draw span will be floated into place during the bridge closure in May and June 2009.

PUBLIC OUTREACH AND PARTNERSHIPS



Watch Construction of the SR 104 Hood Canal Bridge Pontoons

Web users can now get an inside view of State Route 104 Hood Canal Bridge pontoon construction 24 hours-a-day, seven days a week by visiting www.hoodcanalbridge.com. The Washington State Department of Transportation installed a Hood Canal Bridge Project pontoon construction camera at Concrete Technology in Tacoma to provide area residents with up-to-the-minute construction progress photos.

This system is a simple, effective and time-saving way for Hood Canal Bridge users to be involved in the construction process. Olympia and Kitsap Peninsula residents who rely on the bridge for transportation to and from work, school and medical appointments, can watch the project progress without driving to Tacoma, donning a hard hat, vest, safety glasses and boots, and tramping through the construction site.

The camera takes a digital image every 15 minutes. Camera controls allow users to zoom in and out of the picture, search through the photos that have been taken to date and e-mail a photo. The photos will be available throughout the life of the project to use as part of construction management, project communication and environmental reporting efforts.

At the end of pontoon construction, this camera will be moved to the Hood Canal Bridge site to photograph pontoon float-in. Another camera will be installed at Todd Shipyards to document pontoon assembly, outfitting and testing. Between November 2005 and December 2010, the Hood Canal Bridge Team will utilize six different sites around the Puget Sound to complete the project. The cameras allow the project an opportunity to overcome some of the challenges associated with operating multiple construction sites.

The cameras were purchased from OxBlue Corporation, an Atlanta-based company that focuses on providing Web cameras to large construction projects. Currently, five other transportation departments across the United States are using this world-class technology to provide public access to state construction projects.

For real-time views of Hood Canal Bridge traffic camera images, visit www.wsdot.wa.gov/traffic/. For Hood Canal Bridge project information, visit www.hoodcanalbridge.com.

Project Progress Presentations

Civic groups, schools and other organizations booked presentations about the bridge and learned how the construction work affects their community. Hood Canal Bridge engineers and other experts offered information and updates about the innovative engineering techniques, construction progress, the temporary closure of the bridge in 2009 and more. This quarter presentations were given to the following groups:

- February 9, 2006 Puget Sound Attractions Council
This group promotes tourism and travel in the Puget Sound area. These 26 partners help inform travelers of road construction that may affect their driving routes.
- March 2, 2006 Olympia Peninsula Joint Marketing Cooperative
This group promotes tourism and travel on the Olympic Peninsula. This group helps inform travelers of road construction that may affect their driving routes.
- March 20, 2006 Marrowstone Island Community Association
This community will be greatly affected by the coming 2009 bridge closure. Community members learned about travel options during the closure and current HCB pontoon construction progress.
- March 21, 2005 Tacoma-Pierce County Chamber of Commerce
The Chamber was interested in the project's growth and development and provided very valuable information on reaching Tacoma area communities with news about the HCB project.
- March 22, 2005 WSDOT Engineering Conference
The Construction Manager updated WSDOT engineers from across the state on Hood Canal Bridge construction progress.
- March 31, 2006 Governor's Office Staff at Olympic Region Quarterly Reporting Meeting
Three members of the governor's staff attended this meeting to further understand complex WSDOT projects, such as the Hood Canal Bridge.

Site Tours

Site tour protocol was created. This information will govern pontoon construction site access for Concrete Technology in Tacoma. Tours at the Hood Canal Bridge pontoon construction facility will be offered on a regular basis starting in May 2006. Information will soon be available on the project web site, www.hoodcanalbridge.com, regarding how to book a tour, who is eligible, required clothing, safety expectations and conditions to expect on a tour.

SAFETY UPDATE

WSDOT and the contractor, K-G, continue to make safety a number one priority. K-G implemented an extensive safety training program that has contributed to a safety-conscience company culture. WSDOT adopted all of K-G's safety standards related to job site access.

Every day, at every meeting, safety is discussed. New K-G employees must complete a safety orientation, personal interview with the foreman and training on the three most commonly used tools before they start work on the job site. All K-G employees are required to attend daily, weekly, monthly and quarterly safety training sessions. This safety program exceeds the standards set the Occupational Safety and Health Administration (OSHA).

K-G believes that safety is a personal responsibility. The repercussions of not following K-G's safety regulations could cost an employee his or her job. K-G is very serious about keeping their work site and workers safe.

K-G divides accidents into three different categories—reportable, recordable and lost time—depending on the severity of the injury and the type of treatment required. Reportable injuries are tracked at the company level.

Recordable and lost time injury information must be sent to OSHA. An injury is recordable if the employee is given medical treatment, such as setting a bone or receiving medication. K-G recordable injuries are 10 times lower than the industry standard.

RECORDABLE INJURIES

WSDOT, K-G and their project subcontractors worked 62,391 hours this quarter on the Hood Canal Bridge project. Only one recordable injury occurred. A worker cure his hand while unloading materials in Tacoma. No work time was lost due to the injury.

All injuries and any near-misses are reviewed if the employee goes to the doctor and only receives first aid.

PERSONNEL SUMMARY

January–March 2006

	Hours Worked	Recordable Cases	LWD Cases	Lost Workdays	Restricted Cases	Restricted Days	Fatalities
K-G	35,656	0	0	0	0	0	0
Subcontractors	7,854	1	0	0	0	0	0
WSDOT	18,881	0	0	0	0	0	0
Total	62,391	1	0	0	0	0	0

FINANCIAL REPORT

Over this quarter both WSDOT staff and K-G went through a great deal of effort to define specific elements within the current budget. This process included K-G soliciting new pricing from its subcontractors and major suppliers, as well as estimating costs for constructing the project in different locations and new time frames. Through this process, K-G and WSDOT were able to establish the revised contract value for the construction of the Hood Canal Bridge within the project budget. Additionally WSDOT finalized work plans and re-estimated the other costs involved in this project. Those included: WSDOT construction management & engineering; bridge closure mitigation and various other project costs related to extending the duration of the project. The K-G contract value and WSDOT administration costs for the revised scope of work, along with the expenditures to date, were incorporated into the project budget of \$471 million.

The actual costs for the project are tracked and compared to the budget to monitor variances and trends. Costs for K-G's contract are accounted for and provided to WSDOT through a monthly pay estimate process. WSDOT reviews the documentation provided and issues payments for the work performed. WSDOT also tracks all the internal and administrative costs at the project office through the state accounting systems. All the financial information is compiled to determine the total project costs to date. This data is compared to the control budget and reports are generated to the various stake holders, including the citizens of Washington, WSDOT executives and the Governor's office.

Audits are performed on K-G's financial records to confirm that the payments made by WSDOT

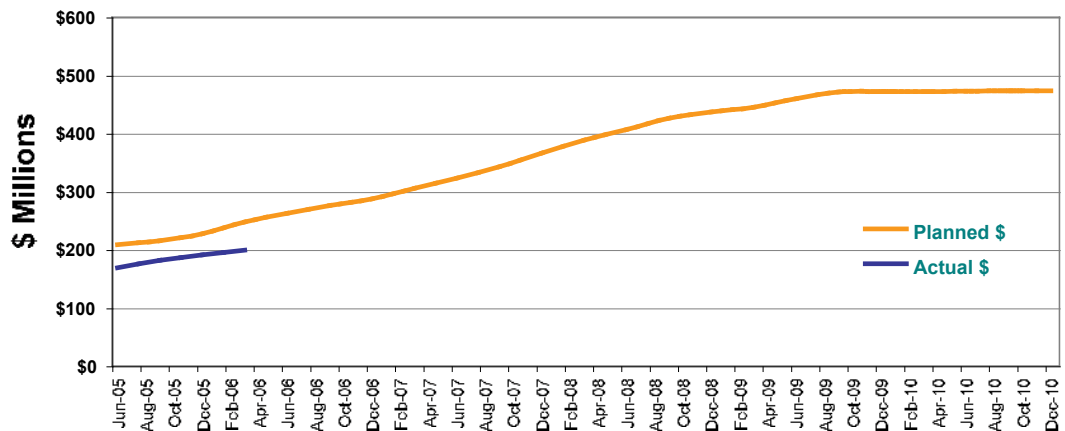
on a monthly basis are accurate. Final project payments to K-G will be determined by a project closeout audit in 2010. An independent auditor is completing a three-month audit process of the K-G costs through January 15, 2006. All indications are that the audit and project records will verify the \$10.9 million anticipated adjustments in contract costs through September 2005 as adjustments in contract costs due to the change in payment methods to K-G, were accurate.

Since October 2005, K-G has spent \$10.9 million more than payments received from WSDOT in order to complete the adjustments required through the new contract payment agreement. Now the progress payment status is correct.

WSDOT will continue to monitor all project costs and budgets on a regular basis to ensure that all financial data is accurate and timely.

Planned vs. Actual Expenditures

(Total Project Cost)



Source: WSDOT Hood Canal Bridge Project Office

Hood Canal Bridge Project Financial Report

Expenditures as of March 31, 2006

	Budget	Expended	% Expended
Original Commitments	\$206,063,000	\$188,974,908	92%
Preliminary Engineering	\$13,990,000	\$12,065,093	86%
Port Angeles Graving Dock	\$86,823,000	\$84,385,981	97%
Bridge Rehabilitation & Approaches	\$54,760,000	\$47,472,922	87%
Major Materials for Bridge Completion	\$61,440,000	\$45,050,912	73%
Anticipated Audit Adjustment	\$(10,950,000)		0%
Modified Commitments	\$264,905,000	\$7,511,132	3%
Construction Management	\$32,036,000	\$3,413,947	11%
Closure Mitigation	\$9,644,000	\$56,884	1%
Bridge Construction	\$220,500,000	\$4,040,301	2%
Mechanical & Electrical Retrofitting	\$2,725,000		0%
Total Project	\$470,968,000	\$196,486,040	42%

Source: WSDOT Hood Canal Bridge Project Office

ENVIRONMENTAL STEWARDSHIP

During this quarter, all WSDOT activities aligned with permit requirements. Bridge site related work that required environmental oversight included pier demolition on the east end of the bridgework, work trestle removal and west side beach restoration.

WSDOT, in coordination with Washington State Fish and Wildlife, removed the west access road and then restored and enhanced the beach on the west side of the bridge as part of the required approach span replacement mitigation work.



New steel settling pond is in place.

In January, a portion of the south side of the east work trestle and the entire south side of the west work trestle were removed. By February, crews had removed the wood flooring from some of the piers on the north side of the east work trestle. Work on the east work trestle stopped at the end

of January in accordance with permitting requirements. Retention of the east access road and remaining work trestle was evaluated during the month of March.

WSDOT also upgraded the storm-water runoff system on the east side of the bridge. A steel settling pond was designed, built, and



Restored beach below west end of bridge is now open to the public.

installed at the bridge site. This improvement reduced the amount of maintenance required for the system.

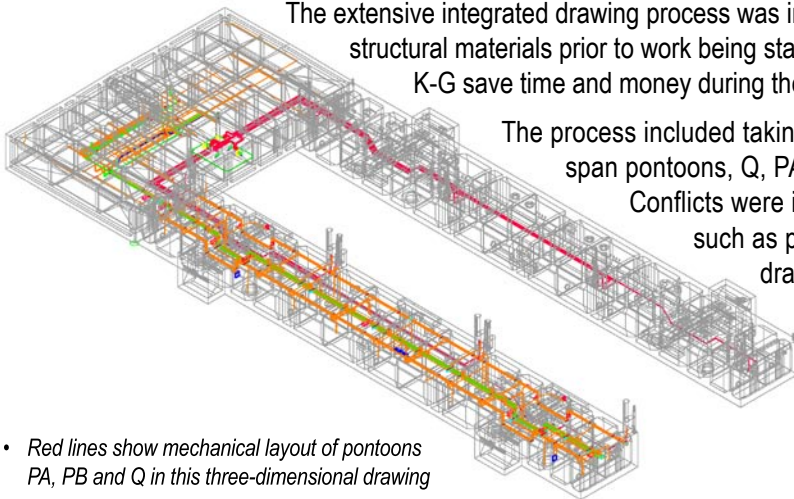
As bridge site environmental oversight slowed toward the end of March, environmental stewardship efforts were then focused on the pontoon construction site in Tacoma.

DESIGN INFORMATION

This quarter, the Design Team set up new processes, prepared contract control drawings, documented materials and worked with K-G to create electrical and mechanical layout drawings and to integrate the electrical and mechanical drawings into three-dimensional drawings.

The extensive integrated drawing process was intended to find conflicts between mechanical, electrical and structural materials prior to work being started on those elements. By solving issues up front, WSDOT and K-G save time and money during the construction, and ensure pontoons are built right the first time.

The process included taking the electrical and mechanical layouts for the first three draw span pontoons, Q, PA and PB, and placing both sets of layouts onto one drawing. Conflicts were identified with electrical, mechanical, and structural elements such as post tensioning ducts, rebar and piping. Revisions to the drawings were made to resolve these issues.



- Red lines show mechanical layout of pontoons PA, PB and Q in this three-dimensional drawing
- Orange and green lines show electrical layouts of pontoons.

LOOKING AHEAD: April–June 2006

Construction Progress

- Continue rebar installation
- Start concrete pours
- Continue staged form setting



Pontoon Q form setting nears completion.

Public Outreach and Partnerships

- 2009 closure mitigation outreach
- Community presentations
- Web site improvements

Safety Update

- Cross-training between WSDOT and K-G staff

Environmental Stewardship

- Weekly monitor various construction sites
- Evaluate slope stability adjacent to the east access road.
- Bridge Site inspection by Department of Ecology

Design Information

- Complete first draft of closure mitigation plan
- Continue integrated drawing effort for cycle 1 pontoons
- Continue control drawing process focusing on special provisions

Hood Canal Bridge Retrofit and East-half Replacement Project

East-half Replacement

Completion Goal: 2009

West-half Retrofit Completion: 2010

Q. Where is the bridge?

A. The Hood Canal Bridge is located between Kitsap and Jefferson counties at the northern mouth of the Hood Canal.

Q. Why is it important?

A. It serves as a vital economic and social link between the greater Puget Sound and the Olympic Peninsula.

Q. What is WSDOT doing?

A. The Washington State Department of Transportation is improving this lifeline by replacing the east-half floating portion of the bridge, replacing the east and west approach spans, replacing the east and west transition truss spans and updating the west-half electrical system. The project completion estimate is 2010.

Q. What can drivers do to stay informed?

A. Sign up to receive the latest news regarding the Hood Canal Bridge Project and other related area transportation news right in your email inbox. Visit www.hoodcanalbridge.com to subscribe.



This report highlights updated Hood Canal Bridge Project information from January 1-March 31, 2006.

For more information about the Hood Canal Bridge Project visit the project web site, www.hoodcanalbridge.com, or contact project staff:

Becky Hixson, Communication Manager,
(253) 305-6450, hixsonb@wsdot.wa.gov

Eric Soderquist, Project Director,
soderqe@wsdot.wa.gov